

STORAGE

FAQ

Q I have a network attached storage (NAS) device, on which I keep a backup of files, but it ignores the Windows file attributes of those files. Is there anything I can do about this?

A Windows file attributes describe certain characteristics about a file, such as whether it is read-only or hidden. Some file attributes can be changed in Windows by right-clicking on the file and choosing Properties.

Unfortunately, files retain these attributes only when stored on disks formatted as FAT32 or NTFS. Many NAS devices run a stripped-down version of the Linux operating system and their disks often use formats such as ext2 or ext3, which often don't support Windows file attributes. This can cause some problems with version control or backup software.

If you need a NAS that supports Windows file attributes, look for one that specifically supports them and NTFS or FAT32.

Alan Lu
PC systems and
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BUFFALO DriveStation Duo 500GB

★★★★★
£157 inc VAT



Buffalo's 500GB DriveStation Duo external hard disk consists of two 250GB disks that can be used either as a RAID 0 or RAID 1 array. It feels sturdy, but is loud in operation.

As a RAID 0 array, the DriveStation can store up to 465GB of data. As a RAID 1 array it holds only half as much, but in the event that one disk fails all your data is preserved on the other disk. Fortunately, you won't breach Buffalo's warranty by opening the case and replacing a failed disk.

Whether configured as RAID 0 or 1, the DriveStation is easily one of the fastest external hard disks we've seen over FireWire (31.31MB/s in our large file test), but over USB it's one of the slowest. If you need USB support you should consider Western Digital's My Book Pro (see 'Also consider...' below). But if you need FireWire 400 or the extra redundancy of RAID 1, the DriveStation is good value.

Alan Lu

SUMMARY

- ✓ Fast FireWire performance
- ✓ RAID
- ✗ Disappointing USB performance

EXTERNAL DESKTOP HARD DISK 500GB capacity, 465GB formatted capacity (RAID 0), 232GB formatted capacity (RAID 1), USB Hi-Speed and FireWire 400 interfaces
PART CODE HD-W500IU2-R1
SUPPLIER www.amazon.co.uk
DETAILS www.buffalo-technology.com

PERFORMANCE (see page 56)



AKASA Integral Fusion

★★★★★
£42 inc VAT



The Integral Fusion is an external USB enclosure for a spare 3.5in PATA hard disk.

Fitting a hard disk requires a screwdriver, but it isn't difficult and the instruction booklet is well illustrated. We fitted it with an 80GB Excelstor disk, and its performance was in line with what we'd expect.

Pressing the Fusion's front-mounted button backs up your files, although the backup software can be confusing to configure and you can't use your own utility with the button. The Fusion also has a built-in memory card reader, which supports the most common card types, and a two-port USB2 hub. We had no trouble connecting bus-powered USB2 devices, including hard disks and scanners, but we wish there were more ports.

The Fusion isn't much cheaper than a separate enclosure, hub and card reader, but it can save space and reduce cable clutter.

Alan Lu

SUMMARY

- ✓ Easy installation
- ✓ Attractive and useful
- ✗ Two-port USB2 hub only

EXTERNAL HARD DISK ENCLOSURE Takes 3½in PATA hard disk, memory card reader, two-port USB2 hub
PART CODE AK-ENFUS01-BK
SUPPLIER www.scan.co.uk
DETAILS www.akasa.co.uk

PERFORMANCE (see page 56)



WESTERN DIGITAL Passport 120GB

★★★★★
£70 inc VAT



BEST BUY We've seen Western Digital's Passport before, but the 120GB

is slimmer. The underside is coated in rubber, so it's less likely to skid across your desk, and the lone USB port is protected by a rubber flap. Western Digital has included its own synchronisation software, although it can't schedule backups.

There's no FireWire port, but Passport is more than fast enough for everyday use and is very cheap.

EXTERNAL HARD DISK 120GB capacity, 111GB formatted capacity (NTFS), USB Hi-Speed, USB powered
PART CODE WDXMS1200
SUPPLIER www.amazon.co.uk
DETAILS www.western-digital.com ✓ Low cost per gigabyte; rubber bottom prevents slippage ✗ Faster portable hard disks are available
FULL REVIEW Feb 2007



BUFFALO LinkStation Pro 250GB

★★★★★
£127 inc VAT

PRICE CUT!



BEST BUY Buffalo's LinkStation Pro 250GB network attached storage is an impressive device. When copying large files, it's almost as quick as a USB hard disk. Backups from your PC are made to the LinkStation using the bundled MEMEO software.

You can back up the LinkStation to a USB hard disk, but you do have to format it first. The LinkStation Pro 250GB is great value and is very easy to set up.

NETWORK ATTACHED STORAGE 250GB hard disk, 10/100/1,000Mbit/s network connection, two USB2 ports
PART CODE LS-250GL
SUPPLIER www.savastore.com
DETAILS www.buffalo-technology.com ✓ Low cost per gigabyte ✗ Must reformat USB backup disks
FULL REVIEW Nov 2006

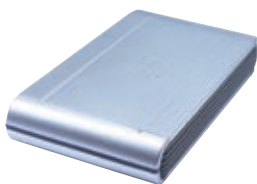


IOMEGA

Desktop Hard Drive
320GB

★★★★★

£115 inc VAT



FireWire 800-equipped external hard disks tend to be faster than FireWire 400 or USB-only models, but are usually more expensive. We were surprised to find all three interfaces on Iomega's 320GB desktop hard disk, which costs just 39p per gigabyte.

When connected using any of the three interfaces, this disk copied files at one of the fastest rates we've seen. Its 26.88MB/s for large files using USB was quick, but the FireWire 400 speed of 32.4MB/s was even quicker. The Desktop Hard Drive was quicker still when using FireWire 800. Unfortunately, it's noticeably noisy.

Retrospect Express backup software is included. Western Digital's 500GB My Book Pro (see 'Also consider...') closely matches Iomega's disk in performance and low cost per gigabyte. However, if you can't stretch to the My Book Pro, Iomega's model is a good-value alternative.

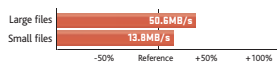
Alan Lu

SUMMARY

- ✓ Fast performance
- ✓ Backup software included
- ✗ Noisy

EXTERNAL DESKTOP HARD DISK 320GB capacity, 298GB formatted capacity, USB Hi-Speed, FireWire 400 and FireWire 800 interfaces
PART CODE 33659
SUPPLIER www.morecomputers.co.uk
DETAILS www.iomega-europe.com

PERFORMANCE (see page 56)



TREKSTOR

DataStation pocket
x.u 120GB

★★★★★

£76 inc VAT



TrekStor's DataStation pocket is one of many portable USB hard disks we've seen, but it managed to catch our attention. The shiny metal case looks smart and feels sturdy, but we'd never recommend dropping a hard disk so the included black carry case is a welcome accessory. The two-plug USB cable means it shouldn't need a mains adaptor for power.

Unlike Western Digital's similar 120GB Passport portable hard disk in 'Also consider...' below, no synchronisation software is included. However, the DataStation was faster in our file-transfer tests. Although it's not the fastest portable disk we've seen, its quick performance reading and writing small files is still noteworthy.

At 68p per gigabyte, the DataStation is slightly more expensive than the Passport, which costs 63p per gigabyte. But if you already have your own backup software, the DataStation's fast performance is worth the extra money.

Alan Lu

SUMMARY

- ✓ Fast for a pocket drive
- ✓ Carry case provided
- ✗ No backup software included

EXTERNAL PORTABLE HARD DISK 120GB capacity, 111GB formatted capacity, USB Hi-Speed, bus powered
SUPPLIER www.scan.co.uk
DETAILS www.trekstor.de/en

PERFORMANCE (see page 56)



CHOOSING AN...

Internal
Hard Disk

Follow the steps to find your ideal specs

CAPACITY: 250GB

SPINDLE SPEED: 7,200rpm

INTERFACE: PATA or SATA

Recommended minimum in grey

1 An internal hard disk with the specifications above should cost around £50. It's fast enough for general use and provides enough storage space for an average user. Make sure you get the interface type that matches your PC.

Parallel ATA (PATA) connectors use wide, ribbon cables and are generally found in older computers. The newer Serial ATA (SATA) interface uses a thinner cable and is slightly quicker.

2 PATA hard disks require a standard four-pin Molex power cable. Some SATA disks can also use a Molex power connector, but others require the newer SATA power connector. If your power supply doesn't have any SATA power leads, then you can buy a converter for around £4 including VAT from www.maplin.co.uk.

3 Buy a hard disk with the capacity that you'll need, but aim to leave a little breathing room, as you'll always need more storage. Hard disks with a capacity of 250GB tend to have the lowest cost per gigabyte, but not by much. Buy the largest hard disk that you can justify.

4 If you want more disk space or you want to protect your data, think about buying hard disks to create a RAID array. These use multiple hard disks to create a single, large, logical disk with better performance or protection for your data. RAID arrays need to be built with hard disks of the same size. Technically these can be from different manufacturers, but try and get identical drives if you can.

5 A hard disk's spindle speed is very important as it governs how quickly the disk can transfer data. A spindle speed of 7,200rpm is common on desktop drives and fast enough for most purposes. If you do a lot of video editing or you run demanding applications, a 10,000rpm hard disk is a better choice, but they are a lot more expensive. Hard disks with 5,400rpm spindle speeds aren't common and are quite slow, but they generate less heat and noise, so could be a good choice if you're building a small, quiet PC.

WESTERN DIGITAL
500GB My Book
Pro Edition

★★★★★

£137 inc VAT

PRICE CUT!

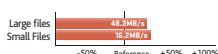


BEST BUY The 500GB My Book Pro has FireWire 400 and 800 ports in addition to USB2.

When connected using USB, it managed a throughput of 24.11MB/s. Using FireWire 800, it was twice as fast.

It is great value at 29p per gigabyte, which is only a few pence more per gigabyte than most 160GB and 250GB external disks.

EXTERNAL HARD DISK 500GB capacity, 465GB formatted capacity (NTFS), USB Hi-Speed, FireWire 400 and 800 interfaces
PART CODE WDG1T5000
SUPPLIER www.lambdatek.com
DETAILS www.westerndigital.com
✓ Excellent value; FireWire and USB ✓ Fast performance
FULL REVIEW Jan 2007

SAMSUNG
SpinPoint T133
HD401LJ

★★★★★

£92 inc VAT



BEST BUY Buying a big hard disk doesn't have to be poor value, as Samsung's SpinPoint T133 HD401LJ proves. It's excellent value, costing just 25p per gigabyte.

Its performance is brilliant, too. It's one of the fastest SATA disks we've seen when reading and writing large files, and reading small files. It struggled a little when writing small files, though.

The T133 is remarkable value, and its performance is nearly faultless.

HARD DISK 3½in internal hard disk, 400GB hard disk, 372GB formatted capacity (NTFS), SATA 300 interface, 7,200rpm spindle speed, 16MB cache PART CODE HD401LJ
SUPPLIER www.scan.co.uk
DETAILS www.samsung.com
✓ Consistently fast performance ✓ Low cost per gigabyte
FULL REVIEW Feb 2007

